

AMENDMENTS TO THE CLAIMS:

Claims 1-30 are canceled without prejudice or disclaimer. Claims 31-52 are added. The following is the status of the claims of the above-captioned application, as amended.

Claims 1-30 (Canceled).

Claim 31 (New). A method of killing or inhibiting a microorganism, comprising contacting said microorganism with a composition comprising a peroxidase produced by or derived from *Coprinus* and a hydrogen peroxide or a source of hydrogen peroxide.

Claim 32 (New). The method of claim 31, wherein the peroxidase is produced by or derived from *Coprinus cinereus*.

Claim 33 (New). The method of claim 31, wherein the peroxidase is produced by or derived from *Coprinus cinereus*, IFO 8371.

Claim 34 (New). The method of claim 31, wherein the peroxidase is encoded by SEQ ID NO: 1.

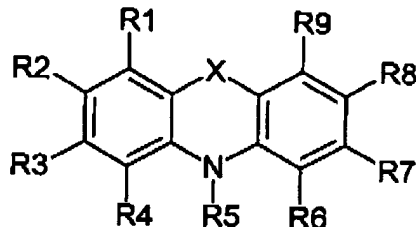
Claim 35 (New). The method of claim 31, wherein the source of hydrogen peroxide is an enzymatic hydrogen peroxide-generating system.

Claim 36 (New). The method of claim 35, wherein the enzymatic hydrogen peroxide-generating system is glucose oxidase/glucose, hexose oxidase/hexose, L- or D-amino acid oxidase/L- or D-amino acid, or lactate oxidase/lactate.

Claim 37 (New). The method of claim 31, wherein composition further comprises an enhancing agent, which is an electron donor.

Claim 38 (New). The method of claim 31, wherein the composition further comprises an enhancing agent, which is a water-soluble halide or thiocyanate salt.

Claim 39 (New). The method of claim 31, wherein the composition further comprises an enhancing agent of the following formula:

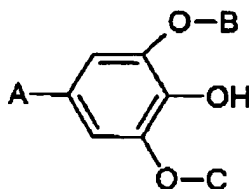


wherein X is (-O-) or (-S-), and R¹-R⁹, which may be identical or different, independently are any of the following radicals: hydrogen, halogen, hydroxy, formyl, carboxy, and esters and salts hereof, carbamoyl, sulfo, and esters and salts hereof, sulfamoyl, nitro, amino, phenyl, C₁-C₁₄-alkyl, C₁-C₅-alkoxy, carbonyl-C₁-C₅-alkyl, aryl-C₁-C₅-alkyl; which carbamoyl, sulfamoyl, wherein the amino groups may be unsubstituted or substituted once or twice with R¹⁰; and which phenyl may be unsubstituted or substituted with one or more R¹⁰; and which C₁-C₁₄-alkyl, C₁-C₅-alkoxy, carbonyl-C₁-C₅-alkyl, and aryl-C₁-C₅-alkyl groups may be saturated or unsaturated, branched or unbranched, and may be unsubstituted or substituted with one or more R¹⁰; wherein R¹⁰ is any of the following radicals: halogen, hydroxy, formyl, carboxy and esters or salts thereof, carbamoyl, sulfo and esters or salts thereof, sulfamoyl, nitro, amino, phenyl, aminoalkyl, piperidino, piperazinyl, pyrrolidin-1-yl, C₁-C₅-alkyl, C₁-C₅-alkoxy; which carbamoyl, sulfamoyl, and amino groups may be unsubstituted or substituted once or twice with hydroxy, C₁-C₅-alkyl, or C₁-C₅-alkoxy; and which phenyl may be substituted with one or more of the following radicals: halogen, hydroxy, amino, formyl, carboxy and esters and salts hereof, carbamoyl, sulfo and esters and salts hereof, and sulfamoyl; and which C₁-C₅-alkyl, and C₁-C₅-alkoxy groups may be saturated or unsaturated, branched or unbranched, and may be substituted once or twice with any of the following radicals: halogen, hydroxy, amino, formyl, carboxy and esters and salts thereof, carbamoyl, sulfo and esters and salts hereof, and sulfamoyl; or wherein two of R¹-R⁹ form a group -B-, in which B is any of the following the groups: (-CHR¹⁰-N=N-), (-CH=CH-)_n, (-CH=N-)_n or (-N=CR¹⁰-NR¹¹-), in which groups n is an integer of from 1 to 3, R¹⁰ is a substituent group as defined above and R¹¹ is defined as R¹⁰.

Claim 40 (New). The method of claim 31, wherein the composition further comprises an enhancing agent selected from the group consisting of 10-methylphenothiazine, phenothiazine-10-propionic acid, N-hydroxysuccinimid phenothiazine-10-propionate, 10-ethyl-phenothiazine-4-carboxylic acid, 10-ethylphen thiazine, 10-propylphen thiazine, 10-isopropylphenothiazine,

methyl phenothiazine-10-propionate, 10-phenylphenothiazine, 10-allylphenothiazine, 10-(3-(4-methylpiperazin-1-yl)propyl)phenothiazine, 10-(2-pyrrolidin-1-yl-ethyl)phenothiazine, 2-methoxy-10-methyl-phenothiazine, 1-methoxy-10-methylphenothiazine, 3-methoxy-10-methylphenothiazine, 3,10-dimethylphenothiazine, 3,7,10-trimethylphenothiazine, 10-(2-hydroxyethyl)phenothiazine, 10-(3-hydroxypropyl)phenothiazine, 3-(2-hydroxyethyl)-10-methylphenothiazine, 3-hydroxymethyl-10-methylphenothiazine, 3,7-dibromophenothiazine-10-propionic acid, phenothiazine-10-propionamide, chlorpromazine, 2-chloro-10-methylphenothiazine, 2-acetyl-10-methylphenothiazine, 10-methylphenoxazine, 10-ethylphenoxazine, phenoxazine-10-propionic acid, 10-(2-hydroxyethyl)phenoxazine and 4-carboxyphenoxazine-10-propionic acid.

Claim 41 (New). The method of claim 31, wherein the composition further comprises an enhancing agent of the following formula:



wherein A is -D, -CH=CH-D, -CH=CH-CH=CH-D, -CH=N-D, -N=N-D, or -N=CH-D; wherein D is -CO-E, -SO₂-E, -N-XY, or -N⁺-XYZ; E is -H, -OH, -R, or -OR, and X, Y and Z may be identical or different and are -H or -R; wherein R is C₁-C₁₆ alkyl, optionally substituted with a carboxy, sulfo or amino group; and B and C may be the same or different and are C_mH_{2m-1}; wherein 1 ≤ m ≤ 5.

Claim 42 (New). The method of claim 31, wherein the composition further comprises acetosyringone, methylsyringate, ethylsyringate, propylsyringate, butylsyringate, hexylsyringate, or octylsyringate.

Claim 43 (New). The method of claim 31, wherein the composition further comprises ammonium halide, calcium halide, lithium halide, potassium halide, or sodium halide.

Claim 44 (New). The method of claim 31, wherein the composition further comprises ammonium iodide, calcium iodide, lithium iodide, potassium iodide, or sodium iodide.

Claim 45 (New). The method of claim 31, wherein the composition further comprises ammonium thiocyanate, potassium thiocyanate, or sodium thiocyanate.

Claim 46 (New). The method of claim 31, wherein the microorganism is present in laundry.

Claim 47 (New). The method of claim 31, wherein the microorganism is present on skin, hair, mucous membranes, teeth, wounds, bruises or in the eye or oral cavity, of a human or animal.

Claim 48 (New). The method of claim 31, wherein the composition is in the form of a soaking, washing or rinsing liquor.

Claim 49 (New). The method of claim 31, wherein the composition is a liquid composition.

Claim 50 (New). The method of claim 31, wherein the composition is a mouth wash, an antiinflammatory liquid, a perspirant, a deodorant, or a nasal spray.

Claim 51 (New). The method of claim 31, wherein the composition is a solid composition.

Claim 52 (New). The method of claim 31, wherein the composition is an eye ointment, an anti-inflammatory ointment, a foot bath salt, a perspirant, or a deodorant.